APPENDIX B--Guide to the Selection of Monitoring Indicators

The following Guide (University of Idaho Stubble Height Review Team, 2004) can be used to prescribe streamside monitoring methods appropriate for various channel types (Rosgen, 1996), and existing and potential vegetative conditions along the greenline. Descriptions of the Channel Types are contained in Appendix A.

I. "C" channel type, herbaceous vegetation dominant, potential vegetation: herbaceous or mixed herbaceous and shrubs.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Use compliance (livestock numbers and time in pasture).
  - Bank disturbance or alteration

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Bank disturbance or alteration

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives:**
  - Streambank stability
  - Greenline composition maintained or trend toward hydric stablizers

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II. "C" channel type, mixed shrub - herbaceous vegetation dominant, potential vegetation: mixed herbaceous and shrubs, or shrubs.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Stubble height on key riparian species or species groups on the greenline
  - Use compliance (livestock numbers and time in pasture).
  - Bank disturbance or alteration
  - Change in preference to woody species sprouts and young

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Stubble height on key riparian species or species groups on the greenline
  - Bank disturbance or alteration
  - Woody species use on sprouts and young (less than 5 feet above ground)

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives:**
  - Streambank stability
  - Greenline composition maintained or trend toward hydric stablizers
  - Woody species regeneration – 15-20% sprouts and young, 60-70% mature, and 15-20% dead

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III. "C" channel type, woody dominant, potential vegetation: shrubs and trees.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Use compliance (livestock numbers and time in pasture).
  - Bank disturbance or alteration
  - Change in preference to woody species sprouts and young

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Bank disturbance or alteration
  - Woody species use on sprouts and young (less than 5 feet above ground)

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives:**
  - Streambank stability
  - Woody species regeneration – 15-20% sprouts and young, 60-70% mature, and 15-20% dead

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IV. "E" channel type, herbaceous vegetation dominant, potential vegetation: herbaceous or mixed herbaceous and shrubs.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Use compliance (livestock numbers and time in pasture).
  - Bank disturbance or alteration

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Bank disturbance or alteration.

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives**
  - Streambank stability
  - Greenline composition maintained or trend toward hydric stablizers

V. "F" channel type (entrenched floodplain), herbaceous vegetation dominant, potential vegetation: herbaceous or mixed herbaceous and shrubs.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Stubble height on key riparian specie, or species groups s on the greenline
  - Use compliance (livestock numbers and time in pasture).
  - Bank disturbance or alteration

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Bank disturbance or alteration

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives:**
  - Streambank stability
  - Greenline composition maintained or trend toward hydric stablizers

VI. "G" channel type (entrenched – no floodplain), herbaceous vegetation or bare banks dominant. Potential vegetation: herbaceous.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Use compliance (livestock numbers and time in pasture)
  - Bank disturbance or alteration

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Bank disturbance or alteration

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives:**
  - Streambank stability
  - Greenline composition maintained or trend toward hydric stablizers

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VI. "B" channel type, mixed shrub - herbaceous vegetation dominant, potential vegetation: mixed herbaceous and shrubs, or shrubs.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Use compliance (livestock numbers and time in pasture)
  - Bank disturbance or alteration
  - Change in preference to woody species sprouts and young

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Stubble height on key riparian species, or species groups on the greenline
  - Bank disturbance or alteration
  - Woody species use on sprouts and young (less than 5 feet above ground)

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives:**
  - Streambank stability
  - Greenline composition maintained or trend toward hydric stablizers
  - Woody species regeneration – 15-20% sprouts and young, 60-70% mature, and 15-20% dead

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VII. "B" channel type, woody dominant, potential vegetation: Shrubs and trees.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
    - Use compliance (livestock numbers and time in pasture)
    - Bank disturbance or alteration

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
    - Bank disturbance or alteration
    - Woody species use on sprouts and young (less than 5 feet above ground)

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives**
    - Streambank stability
    - Woody species regeneration – 15-20% sprouts and young, 60-70% mature, and 15-20% dead

VIII. "A" channel. Mixed shrubs and herbaceous, or shrubs dominant. Potential vegetation: mixed shrubs and herbaceous, or shrubs. Substrate large.

- **TRIGGER: Within-season trigger to move livestock, to maintain or increase vigor on key hydric stabilizers:**
  - Use compliance (livestock numbers and time in pasture).
  - Bank disturbance or alteration
  - Change in preference to woody species sprouts and young

- **ENDPOINT: End-of-season indicator of proper use to maintain or ensure increased composition key hydric stablizers:**
  - Bank disturbance or alteration
  - Woody vegetation use on sprouts and young (less than 5 feet above ground)

- **RIPARIAN OBJECTIVE: Long-term indicator of riparian condition to assess attainment of the Riparian Management Objectives**
  - Streambank stability
  - Woody species regeneration – 15-20% sprouts and young, 60-70% mature, and 15-20% dead

Herbaceous vegetation does not normally contribute significantly to the stability of A channels. The rare exception would likely be associated with A5 and A6 channel types. A5's are steep channels incised in sandy materials and that occur on highly weathered granites or sedimentary rocks. Such channels often experience natural bank erosion through fluvial and earthflow processes. A6's are steep, entrenched channels in weathered shales and lacustrine soils that are very cohesive. These channels tend to be naturally unstable, but herbaceous vegetation may contribute some stability. Overgrazing may exacerbate an already unstable situation in steep channels with fine substrates.